

What is claimed is:

1. A JPEG2000 coding apparatus for generating JPEG2000 file comprising:
a JPEG2000 coder which codes an image data to convert it to
JPEG2000 file;

5 an area discriminator which discriminates an area defined by each object
contained in said image data and specifies type of the object;

an XML data producer which performs character recognition processing
on the area discriminated as that containing a character by said area
discriminator to produce a text data and produces an XML data corresponding
10 to said text data; and

an XML box adder which adds an XML box that can store a specific data
into a bit stream constructing said JPEG2000 file so as to be positioned in back
of a predetermined level of wavelet decomposition and causes said XML box to
store said XML data produced by said XML data producer.

15 2. A JPEG2000 decoding apparatus for receiving and decoding a
JPEG2000 file produced by a JPEG2000 coding apparatus described in claim 1,
the JPEG2000 decoding apparatus comprising:

20 a JPEG2000 decoder which decodes JPEG2000 file to convert it to an
image data;

a selector which causes user to select whether to read an XML box
added into a bit stream of JPEG2000 file in the middle of JPEG2000 decoding
executed by the JPEG2000 decoder; and

25 an XML data processor which processes the XML data stored in the XML
box to acquire a text data.

3. A JPEG2000 coding apparatus for generating JPEG2000 file comprising:
 - a JPEG2000 coder which codes an image data to convert it to JPEG2000 file;
- 5 an area discriminator which discriminates an area defined in each of objects contained in said image data and acquires a position information of the area;
- 10 an XML data producer which produces XML data corresponding to position information of each area discriminated by the area discriminator;
- 15 an XML box adder which adds an XML box that can store a specific data into a bit stream constructing said JPEG2000 file and causes said XML box to store said XML data produced by said XML data producer.

4. A JPEG2000 decoding apparatus for receiving and decoding a
- 15 JPEG2000 file produced by a JPEG2000 coding apparatus described in claim 3, the JPEG2000 decoding apparatus comprising:
 - a JPEG2000 decoder which decodes a JPEG2000 file;
 - 20 a position information acquirer which acquires a position information of each area discriminated by the area discriminator based on the XML data stored in the XML box added into each JPEG2000 file;
 - a coded data specifier which specifies coded data in each JPEG2000 file corresponding to each area based on the position information acquired by the position information acquirer; and
 - 25 a coded data cutter which cuts off a part of the coded data specified by the coded data specifier.

5. The JPEG2000 decoding apparatus of claim 4, wherein the coded data cutter acquires only a part of coded data specified by the coded data specifier, the part of coded data having resolution sufficient to index display, and forms an
5 index file with the acquired coded data.

6. The JPEG2000 decoding apparatus of claim 5, further comprising an XML box adder which adds an XML box to the index file and cause the XML box to store an information data for permitting to specify a source file from
10 which each area constituting the index file is retracted,

wherein the JPEG2000 decoder decodes the source file corresponding to the area in response to selecting each area on the image index displayed.

7. A JPEG2000 coding method for generating JPEG2000 file, comprising
15 steps of:

coding an image data to convert it to JPEG2000 file;

discriminating an area defined by each object contained in said image data and specifying type of the object;

20 performing character recognition processing on the area discriminated as that containing a character to produce a text data and producing an XML data corresponding to said text data; and

25 adding an XML box that can store a specific data into a bit stream constructing said JPEG2000 file so as to be positioned in back of a predetermined level of wavelet decomposition and causing said XML box to store said XML data.

8. A JPEG2000 decoding method for receiving and decoding a JPEG2000 file produced using a JPEG2000 coding method described in claim 7, the JPEG2000 decoding method comprising steps of:

5 decoding JPEG2000 file to convert it to an image data;
 causing user to select whether to read an XML box added into a bit stream of JPEG2000 file in the middle of JPEG2000 decoding; and
 processing the XML data stored in the XML box to acquire a text data.

10 9. A JPEG2000 coding method for generating JPEG2000 file, comprising steps of:

 coding an image data to convert it to JPEG2000 file;
 discriminating an area defined in each of objects contained in said image data and acquiring a position information of the area;

15 producing XML data corresponding to position information of each discriminated area;

 adding an XML box that can store a specific data into a bit stream
 constructing said JPEG2000 file and causing said XML box to store the produced XML data.

20 10. A JPEG2000 decoding method for receiving and decoding a JPEG2000 file produced using a JPEG2000 coding method described in claim 9, the JPEG2000 decoding method comprising steps of:

 decoding a JPEG2000 file;
25 acquiring a position information of each discriminated area based on the

XML data stored in the XML box added into each JPEG2000 file;
specifying coded data in each JPEG2000 file corresponding to each area
based on the acquired position information; and
cutting off a part of the specified coded data.